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Multiple sequence alignment PS01124, HTH_ARAC_FAMILY_2.

AARP_PROST/22-120	SEILVWIEGNLTNR.....LSLDDIAQHSYTKWHLQVRFRKIIVGMPLGEYIRRR I
ADA_ECOLI/85-183	DKITHACRLLEQETp.....VTLEALADQVAMSPFHLHRLFKATTGMTPKAWQQA W A
ADA_MYCTU/87-185	ARAMRLIADGTVD R.....DVGSLAAQLGYTIRQLERLIQAVVGAGPLALARA Q M
ADA_SALTY/94-183	-----LEQEt.....pVTLAFLAQAVAMSPFHLHRLFKASTGMTPKGWQQA W A
ADAA_BACSU/102-200	DLITEYIDKNFTEK.....LTLESLADICHGSPYHMHRTFFKIKIGITLVEYIQQ V
ADIY_ECOLI/149-246	DSVYQIIESDIHKD.....WNLSMVASCLCLSPSLKKKKLKSENT-SYSQIITTC M
AGGR_ECOLI/164-261	DKVRNTIEKDLSKR.....WTLAIIADEFNVSEITIRKRLESEYI-TFNQILMQS M
APPY_ECOLI/139-236	CKITGIISFNIERQ.....WHLKDIAELIYTSESLIKKRLRDEGT-SFTEILRDT M
ARAC_CITFR/180-279	RDACQYISDHLADSn.....FDIASVAQHVCCLSPSRLSHLFRQQLGISVLSWREDQ I
ARAC_ECOLI/180-279	REACQYISDHLADSn.....FDIASVAQHVCCLSPSRLSHLFRQQLGISVLSWREDQ I
ARAC_ERWCH/186-284	IEACQFITSNLAGE.....LRIDEVARHVCLSPSRLAHLFREQVGINILRWREDQ V
ARAC_SALTY/180-279	RDACQYISDHLADSh.....FDIASVAQHVCCLSPSRLSHLFRQQLGISVLSWREDQ I
ARAL_STRAT/202-300	ASALTFLHRDPAHS.....WTVAELASAAAVSRSTLAARFKATVGQGPLEYLTRW I
ARAL_STRLI/202-300	ATALTCLHRDPA R.....WTVADLADTAAVSRSTLAARFKATVGQGPLEYLTRW I
CAFR_YERPE/8-107	NSIIQYIEENLESKf.....INIDCLVLYSGFSRRYLQISFKEYVGMPIGTYIRVR A
CELD_ECOLI/168-274	DDVPQWLKSTVEKMHdkeqfseSALENMVALSAKSQEYLTRATQRYYGKTPMQIINEI I
CFAD_ECOLI/164-261	DKVRNVIEKDLSRK.....WTLGIIADAFNVSEITIRKRLESENT-NFNQILMQ L M
CSVR_ECOLI/166-263	DKVRGVIEKDLSRK.....WTLAIADVFNVSEITIRKRLESED-T-NFNQILMQS M
ENVY_ECOLI/149-246	DSVCRIIQSDIQHY.....WNLRIVASSLCLSPSLKKKKLKKNENT-SYSQIVTEC M
EUTR_ECOLI/243-344	SRAREYVLENMSEP.....VTVLDLCNQLHVSRRRTLQNAFAHAILGIGPNAWLKRI L
EUTR_SALTY/243-344	SRAREYVLENMSEP.....LTVLDLCNQLHVSRRRTLQNAFAHAILGIGPNAWLKRI L
EXSA_PSEAE/171-269	ERLQLFMEKHLYNE.....WKLSDFSREFGMGLTTFKELFGSVGVSPRAWISER I
FAPR_ECOLI/154-251	ERIVTLLFSDLTRK.....WKLSDIAEEMHISEISVRKRLEQECL-NFNQLILDV M
FEAR_ECOLI/199-299	QKVVTLIDDNIREEI.....LRPEWIAGETGMSVRSLYRMFADKGL-VVAQYIRNR L
GADX_ECO27/145-242	TRVCTVINNNIAHE.....WTLARIASELLMSPSLKKKKLREEGT-SYSQLLTEC M
GADX_ECO57/145-242	TRVCTVINNNIAHE.....WTLARIASELLMSPSLKKKKLREEET-SYSQLLTEC M
GADX_ECOLI/145-242	TRVCTVINNNIAHE.....WTLARIASELLMSPSLKKKKLREEET-SYSQLLTEC M
GLXA_RHIME/223-321	LAVLEKMETAIERP.....LDRTAMARLAGVSPRHLDRLFREHRTGTGFLDTYREI L
HRPB_RALSO/375-477	RRAYRYIIENIERSd.....LTTREVAAHINVTERALQLAFKSAVGMSPSSVIRRM L
INVF_SALTY/112-210	YWLVGYLQAQSTSG.....NTMRMLGEDYGVSYTHFRRLCSRALGGKAKSELNRW M
LACR_STAXY/174-272	QHAVDFINTNYQKH.....ITVEDVAKSVNITRSHLYKLFKKNLGCSPKEYLYTI M
LCRF_YERPE/167-265	ERLQKFMEENYLOG.....WKLSKFAREFGMGLTTFKELFGTVYGISPRAWISER I
LUMQ_PHOLE/148-246	VLIDNYIEQHLQKK.....ISVAELSSVAFLAQSQFYALFKSQMGITPHQYVLRK L
MARA_ECOLI/14-112	HSILDWIEDNLESP.....LSLEKVSERSGYSKWHLQRMFKKETGHSLSGQYIRSR M
MARA_SALTY/14-112	HSILDWIEDNLESP.....LSLEKVSERSGYSKWHLQRMFKKETGHSLSGQYIRSR M

Fig. 1A

MELR_ECOLI/194-292	SQMLGFIAENYDQA.....LTINDVAEHVKLNANYAMGIFQVRVQLTMKQYITAM I
MMSR_PSEAE/201-299	DGLHAYMREHLHAR.....LELERLAFCNLKSFHFVSRYKAITGRTPIQHFLHL I
MSMR_STRMU/176-274	NQVKKIIHSQYGSS.....LRVNDIAKKNLSRSYLYKIFRKSSTNLSIKEYILQV M
MXIE_SHIFL/99-199	YHLVLYLLRTIEKEK.....eVRIKSLTEHYGVSEAYFRSLCRKALGAKVKEQLNTW L
MXIE_SHISO/99-199	YHLVLYLLRTIEKEK.....eVRIKSLTEHYGVSEAYFRSLCRKALGAKVKEQLNTW L
ORUR_PSEAE/241-338	TRVRRLLARPGEF.....PDLEQAARELHTSGRSLRRHLSSLGT-TYQQVLDDV K
PCHR_PSEAE/201-296	HAARDLLVGALQEP.....PSLDTLASRVGMNPRKLTAGFRKVFASVFGYLQEY L
PERA_ECO27/168-265	DRVIKVIELDISKN.....WKLGDVSSSMFMSDCLRKQNLNKENL-TFKKIMLDI M
POCR_SALTY/195-293	KKALRYIDAHLSDD.....LRLEDVASHVYLSPPYFSKLFKKYQGIGFNWVNRQ M
PQRA_PROVU/7-107	NDILKWLETQLQRNe.....gIKIDTIANKSGYSKWHLQRIKDFKGCGLGEYVRKR L
RAFR_PEDPE/176-274	NLAVSYLQENYSTG.....CTIMDLCHYLNLSRSYLYTLFKTHANTSPQKLLTKL L
RAMA_ENTCL/9-107	DTIVEWIDDNLHQP.....LRIEDIARHAGYSKWHLQRLFLQYKGESLGRYIRER L
RAMA_KLEPN/9-107	DTIVEWIDDNLHQP.....LRIDDIARHAGYSKWHLQRLFLQYKGESLGRYIRER L
RHAR_ECOLI/209-307	DKLITRLAASLKSP.....FALDKFCDEASCSESVLRQQFRQQTGMTINQYLRQV V
RHAR_SALTY/179-277	DKLITALANSLECP.....FALDAFCQEQECSESVLRQQFRAQTGMTINQYLRQV I
RHAS_ECOLI/174-272	NLLLAWLEDHFADE.....VNWDADAVQFSLSLRTLHRQLKQQTGLTPQRYLNRL L
RHAS_SALTY/174-272	NQLMAWLEDHFAEE.....VCWEAVAEQFSLSLRTLHRQLKQHTGLTPQRYLNRL L
RHRA_RHIME/210-310	ASIKMRVEQNLANGS.....FSITDVAEAEERITPRAIQKFFSREGT-TFSRYVLGR L
RNS_ECOLI/164-261	DKVRNLIKDLSRK.....WTLGIIADAFNASEITIRKRLESENT-NFNQILMQL M
ROB_ECOLI/8-106	RDLLIWLEGHLDQP.....LSLDNVAKAGYSKWHLQRMFKDVTGHAIGAYIRAR L
SOXS_ECOLI/7-105	QDLIAWIDEHIDQP.....LNIDVAKKSGYSKWYLQRMFRTVTHQTLGDIYIRQ L
SOXS_SALTY/7-105	QTLIEWIDEHIDQP.....LNIDVAKKSGYSKWYLQRMFRTVTHQTLGEYIRQ L
TCPN_VIBCH/172-269	EKISCLVKSDITRN.....WRWADICGELTRNRMILKKELESRGV-KFRELINSI I
TETD_ECOLI/31-129	KDVLWIEHNLDQS.....LLDDVANKAGYTKWYFQRLFKKVTGVTLASAYIRAR L
THCR_RHOER/227-328	RLAVDYLEAHAQOP.....LTVAQVARNVGVSVRSLQVGFQNSLGTTPMRQLKII M
URER_ECOLI/171-268	QAIETHLITQEPQKK.....WHLDDVAKALFTTPSTLRRHLNREGV-SFRQLLLDV M
URER_PROMI/171-268	QAIETHLITQDPQRK.....WHLEDVAKTLYTTPSTLRRHLSKEGV-SFCQLLLDV I
VIRF_SHIDY/161-258	DQIRKIVEKNIEKR.....WRLSDISNNLNLSEIAVRKRLESEKL-TFQQILLDI M
VIRF_YEREN/167-265	ERLQKFMEENYLQ.....WKLSKFAREFGMGLTTFKELEFGTVYGISPRAWISER I
VIRS_MYCTU/236-334	ERVVGLARRLLPTGq.....CSAEAIADQDLMHPRTLQRRLLAAEGL-RCHDLIERE R
XYLR_ECOLI/288-386	IQAMHYIRNHACKG.....IKVDQVLDVAVGISRSNLEKRFKEEVGETIHAMIHAE L
XYLR_HAEIN/288-386	IQAMHYIRHRACHR.....IKVGQVLDHLETSSRNLEQRFKNEMNKTIHQVIHEE I
XYLS_PSEPU/214-315	ERVVQFIEENLKR.....ISLERLAELAMSPRSLYNLFEKHAGTTPKNIYIRN L
XYS1_PSEPU/214-315	ERVVQFIEENLKR.....ISLERLAELAMSPRSLYNLFEKHAGTTPKNIYIRN L
XYS2_PSEPU/39-140	ERVVQFIEENVKRS.....ISLEQLAELALMSPRSLYTMFEKHGTGTPMNIYIRN L
XYS3_PSEPU/214-315	ERVVQFIEDNLKQS.....ISLERLAELALMSPRSLYTLFEKHAGTTPKNIYIRN L
XYS4_PSEPU/214-315	ERVVQFIEENLKR.....ISLERLAELALMSPRSLYTLFEKHAGTTPKNIYIRN L

Fig. 1B



Y4FK_RHISN/318-417
YA52_HAEIN/194-295
YBBB_BACSU/166-264
YBCM_ECOLI/165-262
YCGK_ALTCA/67-163
YD95_MYCTU/242-343
YDEO_ECOLI/137-233
YDIP_ECOLI/183-281
YEAM_ECOLI/158-258
YFIF_BACSU/192-289
YHIW_ECOLI/139-236
YIDL_ECOLI/197-295
YIJO_ECOLI/172-270
YISR_BACSU/183-281
YKGA_ECOLI/19-117
YKGD_ECOLI/177-278
YMCR_STRLA/184-281
YPDC_ECOLI/184-282
YQHC_ECOLI/213-311
AARP_PROST/22-120
ADA_ECOLI/85-183
ADA_MYCTU/87-185
ADA_SALTY/94-183
ADAA_BACSU/102-200
ADYI_ECOLI/149-246
AGGR_ECOLI/164-261
APPY_ECOLI/139-236
ARAC_CITFR/180-279
ARAC_ECOLI/180-279
ARAC_ERWCH/186-284
ARAC_SALTY/180-279
ARAL_STRAT/202-300
ARAL_STRLI/202-300
CAFR_YERPE/8-107
CELD_ECOLI/168-274
CFAD_ECOLI/164-261
CSVR_ECOLI/166-263
LKAFAFMRENLTNP.....VTIEDLAAARCTPRALQRMFRTYRGGSPMSVLCNY L
KRLNTALIAILQQPqn.....dWHIEQLAELATMSRANFIRIFQQHIGMSPGRFLTkv L
EKTkHYIETHADTK.....ITLAQLSQMAGISAKHYSESEFKKWTGQSVTEFITKT I
SRCYNLLSEPgTK.....WTANKVARYLYISVSTLHRRRLASEGV-SFQSIILDDV L
QNAMLYIENNYFND.....INIDTVAFSVGVSRSYLVKQFKLATNKTINNRIIEV I
RGITALVRSKLFRDsg....lfPTFTDVAGELDMHPRTLRRRLAEEGT-SFRALLGEA S
GKVRNIVNMKPAHP.....WKLKIDICDCLYISESLKKKKLQEQT-TFSQIILDA M
KDILFYLNNNYREK.....ITLEQLSKKFRASVSYICHEFTKEYRISPINYVIQR M
PKIRTMVEMMAKGPve.....wGALQWAGFFAMSERNLARLIVKETGLSFRQWRQQLQL
TEVKLHIKDNLSQP.....LKLTDVASHFHSRHLRLFAAEELGVSYSEFVQNE I
GKVERLISFDIAKR.....WYLRDIAERMYTSESLIKKKLQDENT-CFSKILLAS M
EKLIATLHASLQOR.....WSVADMAATIPCSEAWLRLFLRYTGKTPKEYYILDA L
EAIrDYIDERYASA.....LTRESVAQAFYISPNYLSHLFQKTGAIGFNEYLNHT L
WEAARYLQEHYKEK.....TTIKDLSLALHYHQDYVSRMQQVGLGVTTPAQYTNRV M
QQLLEWIECNLEHP.....ISIEDIAQKSGYSRRNIQLLFRNFMHVPLGEYIRKR L
PRLGAVIQOMLEMPgh.....aWTVESLASIAHMSRASFAQLFRDVSgTTPPLAVLTKL L
DPLLRAVVVSLEAG.....RSVTATADSVGLGARQLHRRSLAAFGYGPkTLARVL M
HSICNWWQDNYAQP.....LTRESVAQFFNITPNHLSKLFAHQGTMRfEYVVRWV M
SRVLKRIENKYTEN.....LSVEQLAAEANMSVSFAFHNFKSVTSTSPLOYLKNY L
CEAAKELQTTNL...QVIDIALKYQ DSQQS AKR KAYLGIS SLYRLS
RRLRESLAKGE-...SVTTSILNA PDSSSYRKADETLGMTAKQFRHG
QTARVLIETTNL...PFGDVAFAA SSIRQ NDTVRLACDGT TALRAR
RRLREALAKGE-...PITAAIYRA PDSSSYRRHADQTLGMTAKQFRKG
HAACKYLIQTNK...AIGDIAICV IANAPY ITL KKKTGQT ARFRQM
RYAVNELMMDGK...NISQVSQSC NSTSY ISV KDFYGMT LHYVSQ
SKAALLLLDNSY...QISQISNMI SSTSY IRL VKHFGIT KQFLTY
RYAKKLITSNSY...SINVVAQKC NSTSY ICA KDYYGVT SHYFEK
SQAKLLLLSTRM...PIATVGRNV DDQLY SRV KKCTGAS SEFRAG
SQAKLLLLSTRM...PIATVGRNV DDQLY SRV KKCTGAS SEFRAG
IRAKLLLLQTTQE...SIANIGRVV DDQLY SRV RKRVGVS SDFRRR
SQAKLLLLSTRM...PIATVGRNV DDQLY SRV KKCTGAS SEFRAG
ELTARQLREGSA...PLAAIAHSV GSESALSVA KRVLGmn GDYRKH
ELAARQLREGNA...TLASIAHSV GSESALSVA KRVLGMP GDYRKH
SRAAALLRLTRL...TIEISAKLF DSQQT TRE KKIFGYT RQYRMI
NFAKKQLEMTNY...SVTDIAFEA SSPSL IKT KKLTSFT KSYRKK
SKAALLLLLENSY...QISQISNMI ISSASY IRV NKHYGVT KQFFTY
SKAALLLLLENSY...QISQISNMI ISSASY IRI NKHFGVTRSSFLII

Fig. 1C

ENVY_ECOLI/149-246	RYAVQMLMDNK...NITQVAQLC	SSTS ISV KAFYGLT LNYLAK
EUTR_ECOLI/243-344	NAVRRELISPWSqsmTVKDAAMQW	WHLGQ ATD QQLFSEK SLTLHQ
EUTR_SALTY/243-344	NAVRRELISPWSqsaTVKDAAMQW	WHLGQ ATD QQLFAEK SLTLHQ
EXSA_PSEAE/171-269	LYAHQLLLLNDM...SIVDIAMEA	SSQSY TQS RRRFGCT SRSRQG
FAPR_ECOLI/154-251	NQAAKFIRSDH...QIGMIASLV	TSVSY IKT KEYYGVT KKFEIG
FEAR_ECOLI/199-299	DFCADAIRHAAdd.eKLAGIGFHW	SDQSH STV KQRFGMT GEYRRK
GADX_ECO27/145-242	QRALQLIVIYGV...SIKRVAVSC	HSVSY IYV RNYYGMT TEYQER
GADX_ECO57/145-242	QRALQLIVIHGF...SIKRVAVSC	HSVSY IYV RNYYGMT TEYQER
GADX_ECOLI/145-242	QRALQLIVIHGF...SIKRVAVSC	HSVSY IYV RNYYGMT TEYQER
GLXA_RHIME/223-321	RHARRLLQQSPL...SIPEIAYAT	SSPAH SNA KRLFSQT GSLRRR
HRPB_RALSO/375-477	EGIRSDLLDSErnpnsNIIDTASRW	IRRSALVKG RKQFNEA SETIWR
INVF_SALTY/112-210	AQSLNLSVEGHE...NITQLAVNH	SSPSH SSEIKELIGVS RKLSNI
LACR_STAXY/174-272	YHASQLLIHTST...LISDISRQV	KDPLL SKN TKHFEISASEYRHH
LCRF_YERPE/167-265	LYAHQLLLLNGKM...SIVDIAMEA	SSQSY TQS RRRFGCT SQARLT
LUMQ_PHOLE/148-246	DLAKQLIAERQK...PLSQVAQLC	SSQSS SQA RRLYGMS TRYQFF
MARA_ECOLI/14-112	TEIAQKLKESNE...PILYLAERY	ESQQTLTTRT KNYFDVP HKYRMT
MARA_SALTY/14-112	TEIAQKLKESNE...PILYLAERY	ESQQTLTTRT KNYFDVP HKYRIT
MELR_ECOLI/194-292	NHVRALLSDTDK...SILDIALTA	RSSSR YST GKYVGMS QQYRKL
MMSR_PSEAE/201-299	EYACQLLDSSDQ...SVARVGQAV	DDSYI SRL SKVMGLS SAYRQR
MSMR_STRMU/176-274	KRSQYLLENPKL...SIAEISNSV	SDSLA SKA KNYFGKS SKFRKE
MXIE_SHIFL/99-199	VNGLLDVFLHNQ...TITSAAMNN	RSTSH SNEIKTRLGFSARELSNI
MXIE_SHISO/99-199	VNGLLDVFLHNQ...TITSAAMNN	ASTSH SNEIKTRLGFSARELSNI
ORUR_PSEAE/241-338	RLALQYLTQTQL...PLYEIALLL	NDSSN RRA RKWTGKL SDYREA
PCHR_PSEAE/201-296	REAHRLMCDEEA...NVSTVAYRV	S-PAH SIA RKRYGIS SEIR--
PERA_ECO27/168-265	KHASLFLRTTDK...NIDEISCLV	NSTSY IKV KEYYNTT KKYNGV
POCR_SALTY/195-293	VSARELLCHSDW...SIASIARNL	SQTSY CKV RQTYQVT QAYRQQ
PQRA_PROVU/7-107	LEAAKSLQEKDM...SILDIALMY	SSQAT TRI KKHFNNT AKFREN
RAFR_PEDPE/176-274	EDAKQRLSTSNN...SVQSIANMV	KDSFT SKA KRYSGAS SYRKS
RAMA_ENTCL/9-107	LLAARDLRESDE...RVYEICLRY	ESQQT TRI TRTFHQP GAYRKE
RAMA_KLEPN/9-107	LLAARDLRDTDQ...RVYDICKY	DSQQT TRV TRTFNQP GAYRKE
RHAR_ECOLI/209-307	CHAQYLLQHSRL...LISDISTEC	EDSNY SVV TRETGMT SQWRHL
RHAR_SALTY/179-277	CHAQYLLQHSPL...MISEISMOC	EDSNY SVV TRETGMT SQWRHL
RHAS_ECOLI/174-272	MKARHLLRHSEA...SVTDIAYRC	SDSNH STL RREFNWS RDIRQG
RHAS_SALTY/174-272	IKARHLLRHSDH...SVTEIAYRC	GDSNH STL RREFNWS RDIRQG
RHRA_RHIME/210-310	SLAKSLILAEGEa.tSISQIAYNV	NDLSY NRT RSRYGVR SDLRRL
RNS_ECOLI/164-261	SKAALLLLENSY...QISQISNMI	ISSASY IRI NKHYGVT KQFFTY

Fig. 1D



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ROB_ECOLI/8-106	SKSAVALRLTAR...PILDIALQYR	DSQOT	TRA	KKQFAQT	ALYRRS
SOXS_ECOLI/7-105	LLAAVELRTTER...PIFDIAMDL	VSQOT	SRV	RRQFDRT	SDYRHR
SOXS_SALTY/7-105	LLAAVELRTTER...PIFDIAMDL	VSQOT	SRV	RREFDRT	SDYRHR
TCPN_VIBCH/172-269	SYSISLMTGEF...KIKQIAYQS	ASVS	STV	KSTMNVA	SEYLFM
TETD_ECOLI/31-129	TKAAVELRLTKK...TILEIALKYQ	DSQOS	TRR	KYIFKVT	SYYRRN
THCR_RHOER/227-328	QKARKDLLRADPaseGVTEIAQRW	LHVGR	AGE	KQTFGVS	SEDLRT
URER_ECOLI/171-268	GMALNYLTFSNY...SVFQISHRC	GSNAY	CDV	KRKYNMT	SQFRLQ
URER_PROMI/171-268	PIALNYLTFSNY...SVFQISHRC	GSNAY	CDA	KRKYGMT	SQFRTQ
VIRF_SHIDY/161-258	HHAAKLLLSQS...YINDVSRLLI	ISSPSY	IRK	NEYYGIT	KKFYLY
VIRF_YEREN/167-265	LYAHQLLNGKM...SIVDIAMEA	SSQSY	TQS	RRFEGCT	SQARLT
VIRS_MYCTU/236-334	AQAARYLAQPL...YLSQIAVLL	SEQSALNRSCRRWFGMT	RQYRAY		
XYLR_ECOLI/288-386	EKARSLLISTTL...SINEISQMC	PSLOY	YSV	KKAYDIT	KEYRDV
XYLR_HAEIN/288-386	SRAKNLLQOTDI...SIKEITEIC	PSIQY	YSV	KKEFEMT	KEFRLN
XYLS_PSEPU/214-315	ESIRACLNDPsanvrSITEIALDY	LHLGR	AEN	RSAFGEL	SDTLRQ
XYS1_PSEPU/214-315	ESIRACLNDPsanvrSITEIALDY	LHLGR	AEN	RSAFGEL	SDTLRQ
XYS2_PSEPU/39-140	ECVRACLSNPTTnirSITEVALDY	LHLGR	AEK	RSTFGEL	SDTLSL
XYS3_PSEPU/214-315	ECIRARLSDPNanvrSVTEMALDY	FHTGR	AEN	RSTFGEL	SDTLRR
XYS4_PSEPU/214-315	ECIRARLSDPNanvrSVTEMALDY	FHTGR	AEN	RSTFGEL	SDTLRR
Y4FK_RHISN/318-417	AAAHGAIKAGRag...SITEALNLQ	SNPGR	SVL	KSAYGLS	SSALRF
YA52_HAEIN/194-295	QSAFLLKQSQ...SVLAIALEV	QSEAH	CKV	KNYYQLS	SQYRKS
YBBB_BACSU/166-264	TKAKRRLMAKSN...KLKEIAHQ	QDEFY	SRI	KKYTGCS	TSYMKK
YBCM_ECOLI/165-262	NNALSAIQTTVK...PISEIAREN	KCPSR	TER	HNRFNIT	REIRKA
YCGK_ALTCA/67-163	EQAKKVLLKK--...SVTETAYEV	NNSNY	ATV	KKRTNYT	KQFKRT
YD95_MYCTU/242-343	TVAVDLLRNVL...TVQQVSTRL	TEVST	SHA	KRWYGVA	SEYSRR
YDEO_ECOLI/137-233	QHAKNLIRVEG...SVNKIAEQ	ASTSY	IYA	RKHFGNS	KRVSKE
YDIP_ECOLI/183-281	TEAKWSLTNTEL...SQAEISWRV	ENVDH	AKL	LRHVGCS	SDYRRQ
YEAM_ECOLI/158-258	IMALQGLVKGD...TVQKVAHTL	DSTTA	ITM	KKGLGQT	GRYIAR
YFIF_BACSU/192-289	NKAAELLKSTNL...SIKEIAEEI	S-VHY	TRV	SAKIGSS	GLFRSL
YHIW_ECOLI/139-236	SMARRLLELRQI...PLHTIAEKC	SSTSY	INT	RQYYGVT	HQFAQH
YIDL_ECOLI/197-295	DLALSLLKQQGN...SVGEVADTLN	FDSFH	SKA	KKHFGYA	SAVLKN
YIJO_ECOLI/172-270	EHAKTLLKGYDL...KVKEVAHAC	VDSNY	CRL	RKNTERS	SEYRRQ
YISR_BACSU/183-281	TEAKRLLSSTND...KMGVIAETV	MEDPTY	SKL	KQIEGIS	IEYRKI
YKGA_ECOLI/19-117	CRAAILVRLTAK...SMLDIALSLH	DSQOS	SRE	KKLFGCS	REYRHR
YKGD_ECOLI/177-278	QIAAQMFSERTL...PVVIAESV	ASESS	HKA	VREFGCT	GEYRER
YMCR_STRLA/184-281	QRALRLARAGV...PFAETATLA	ADQAHLARADVREMASSLSSE	VER		
YPCD_ECOLI/184-282	AKARMILQKHYHL...SIHEVAQRC	PDSDY	CRV	RRQFGLT	GEYSAR
YQHC_ECOLI/213-311	HKARMMIHDGM...KASAAAMRV	ESASQ	SRE	KRYFGVT	GEDAAR

Fig. 1E



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MarA protein (BAA15221)

MTMSRRNTDAITIH SILDWIEDNLESPLSLEKVSERSGYSKWHLQRMFKKETGHS LG
QYIRSRKMTEIAQKLKESNEPILYLAERYGFESQQT LTRTFKNYFDVPPHKYRMTNM
QGESRFLHPLNHYS

Rob protein (AAC73403)

MRYDKELTENEMIRQKILQQLLEWIECNLEHPISIEDIAQKSGYSRRNIQLLFRNFMHV
PLGEYIRKRRL
CRAAILVRLTAKSMLDIALSLHFDSQQSFSREFKKLFGCSPREYRHRDYWDLANIFPS
FLIRQQQKTECR
LINFPETPIFGNSFKYDIEVSNKSPDEEVKLRRHHLARCMKNFKTDIYFVSTFEPSTKS
VDLLTVETFAG TVCEYADMPKEWTTTRGLYDPTHVIWTQA

SoxS protien (P22539)

MSHQKIIQDLIAWIDEHIDQPLNIDVVAKKSGYSKWYLQRMFRTVTHQTLGDYIRQR
RLLLA AVELRTTE RPIFDIAMDLGYVSQQTF SRVFRRQFDRTPSDYRHRL

Fig. 2



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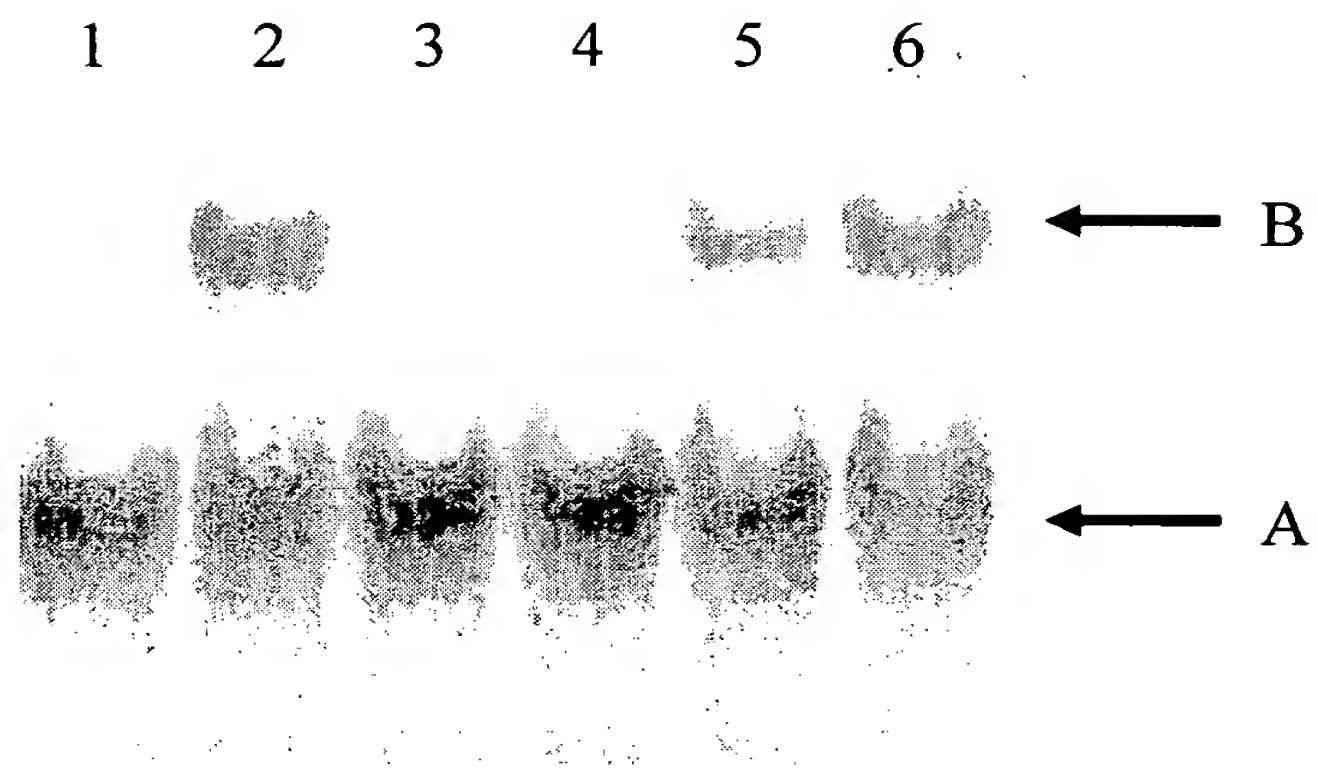
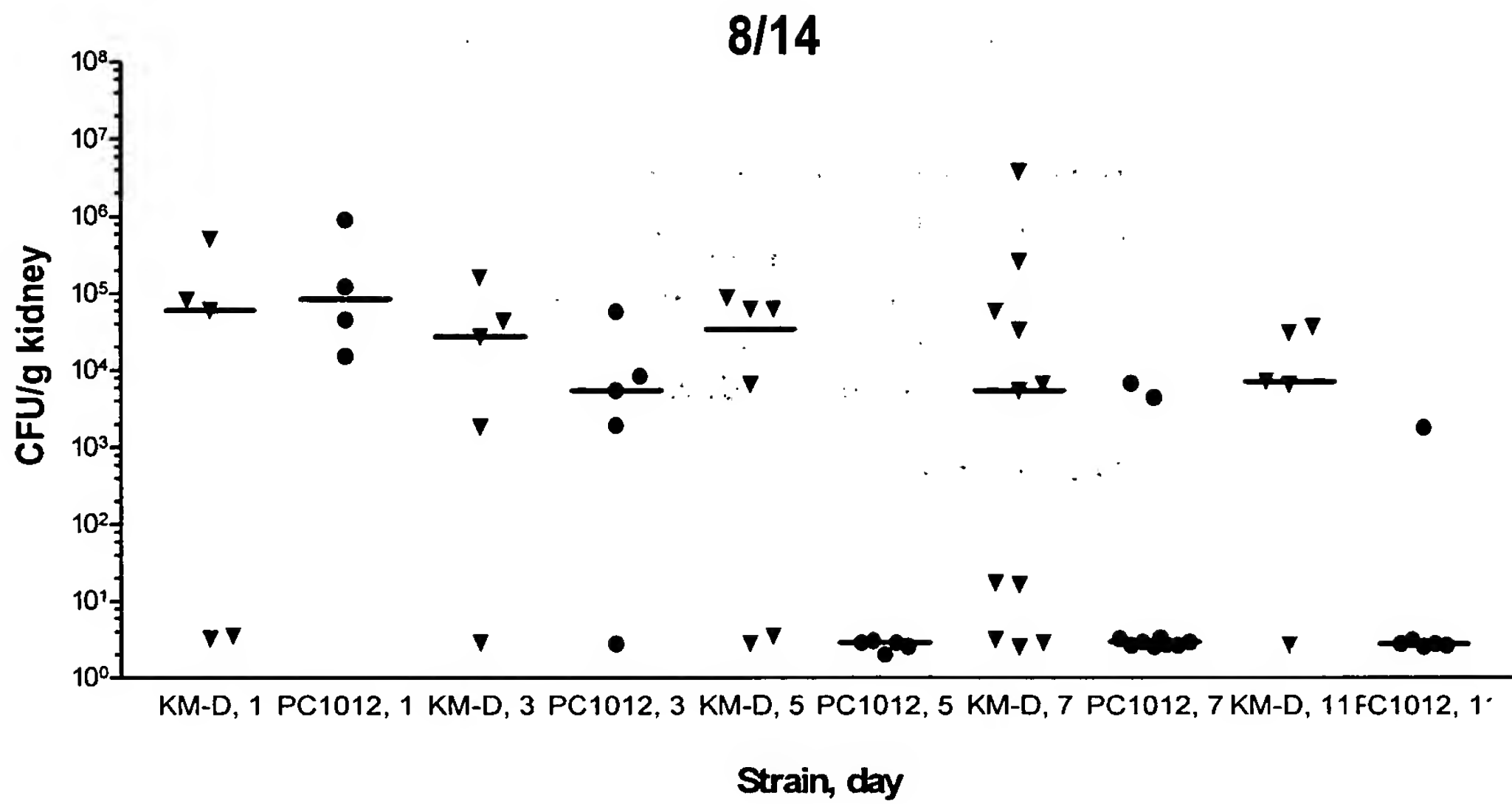


Fig. 3



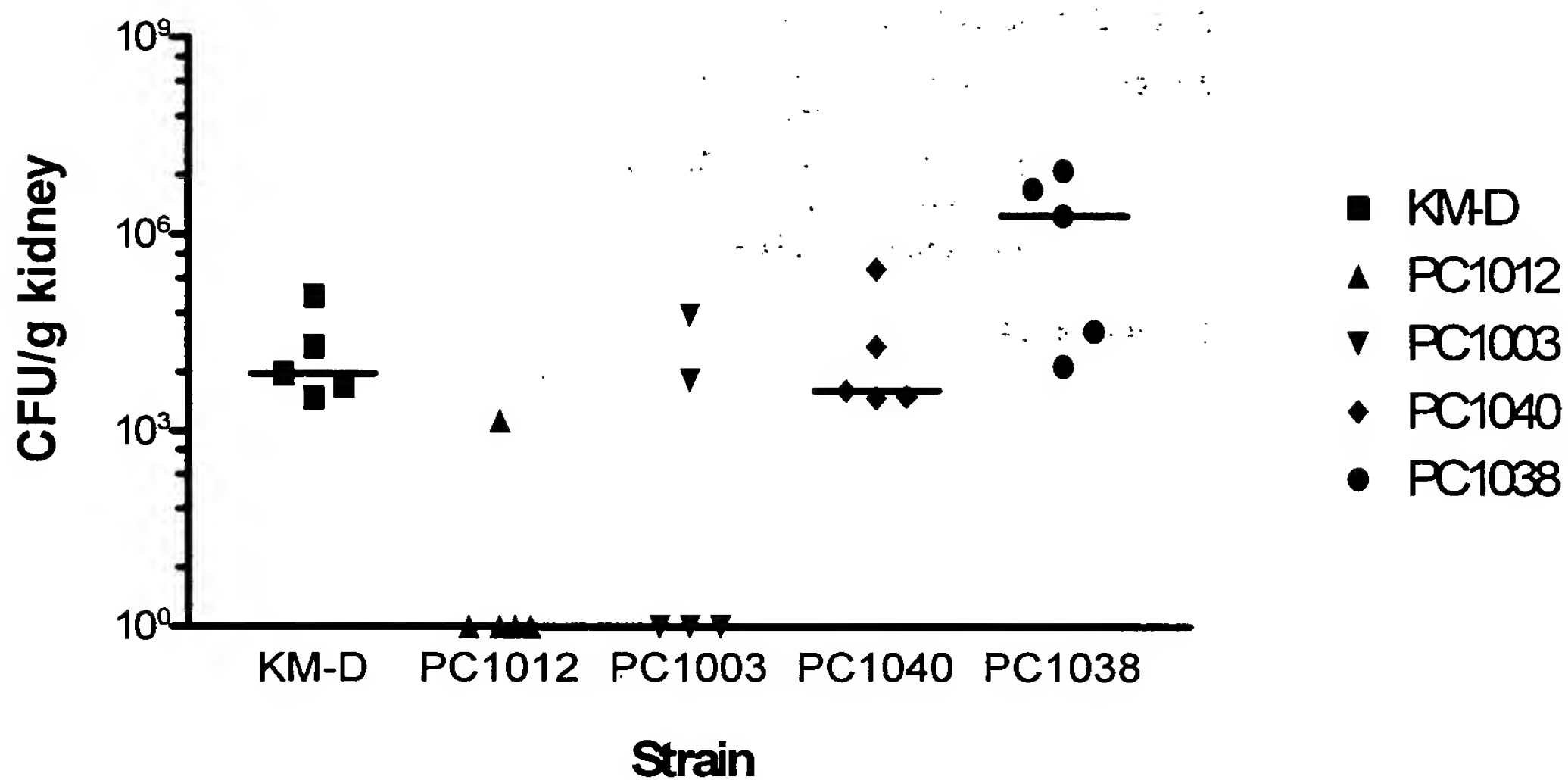
- ▼ KM-D, 1
- PC1012, 1
- ▼ KM-D, 3
- PC1012, 3
- ▼ KM-D, 5
- PC1012, 5
- ▼ KM-D, 7
- PC1012, 7
- ▼ KM-D, 11
- PC1012, 11

Strains compared	Student's <i>t</i> -test values (p)
KMD vs. PC1012, day 1	0.249
KMD vs. PC1012, day 3	0.752
KMD vs. PC1012, day 5	0.018
KMD vs. PC1012, day 7	0.038
KMD vs. PC1012, day 11	0.017

Fig. 4



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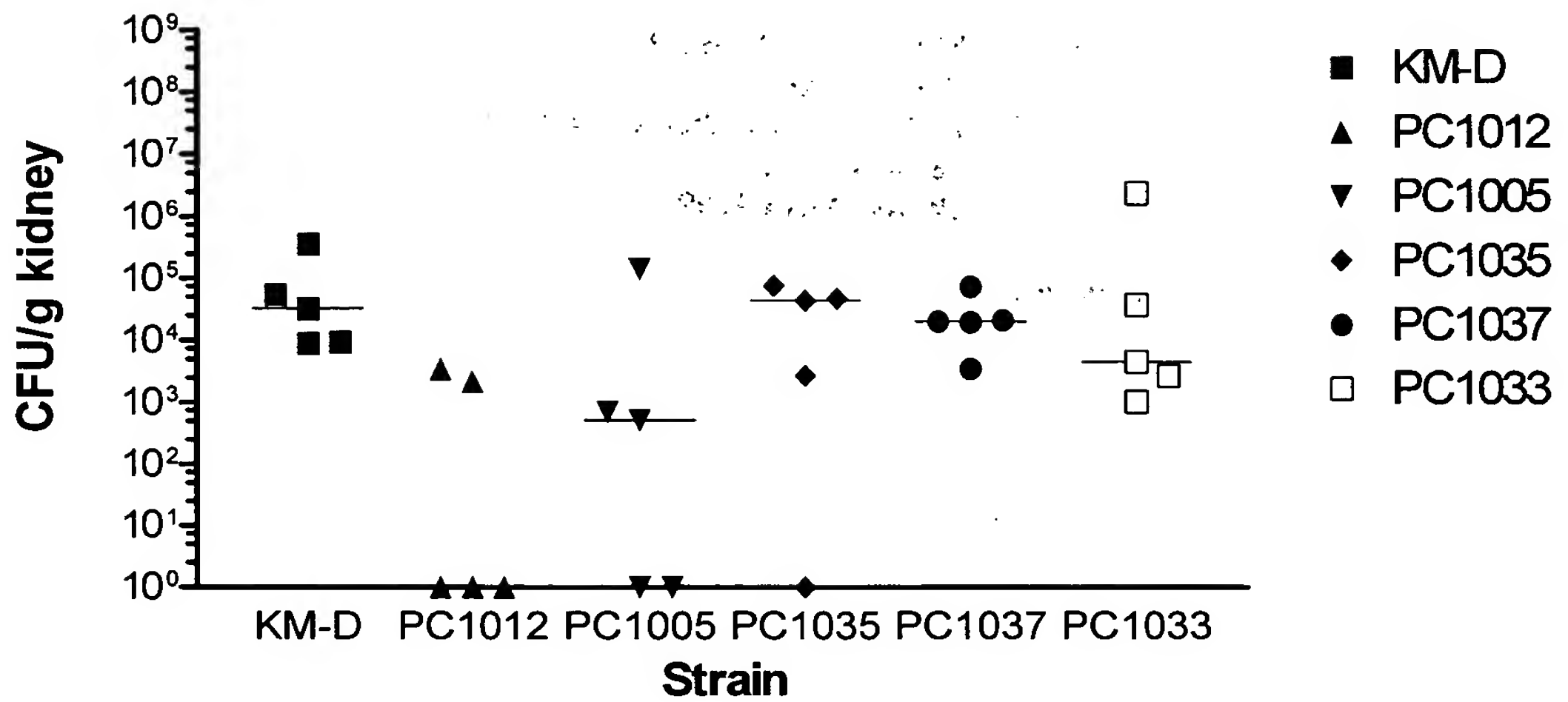


Strains compared	Student's <i>t</i> -test values (p)
KMD vs. PC1012	0.001
KMD vs. PC1003	0.061
KMD vs. PC1040	0.990
KMD vs. PC1038	0.042

Fig. 5



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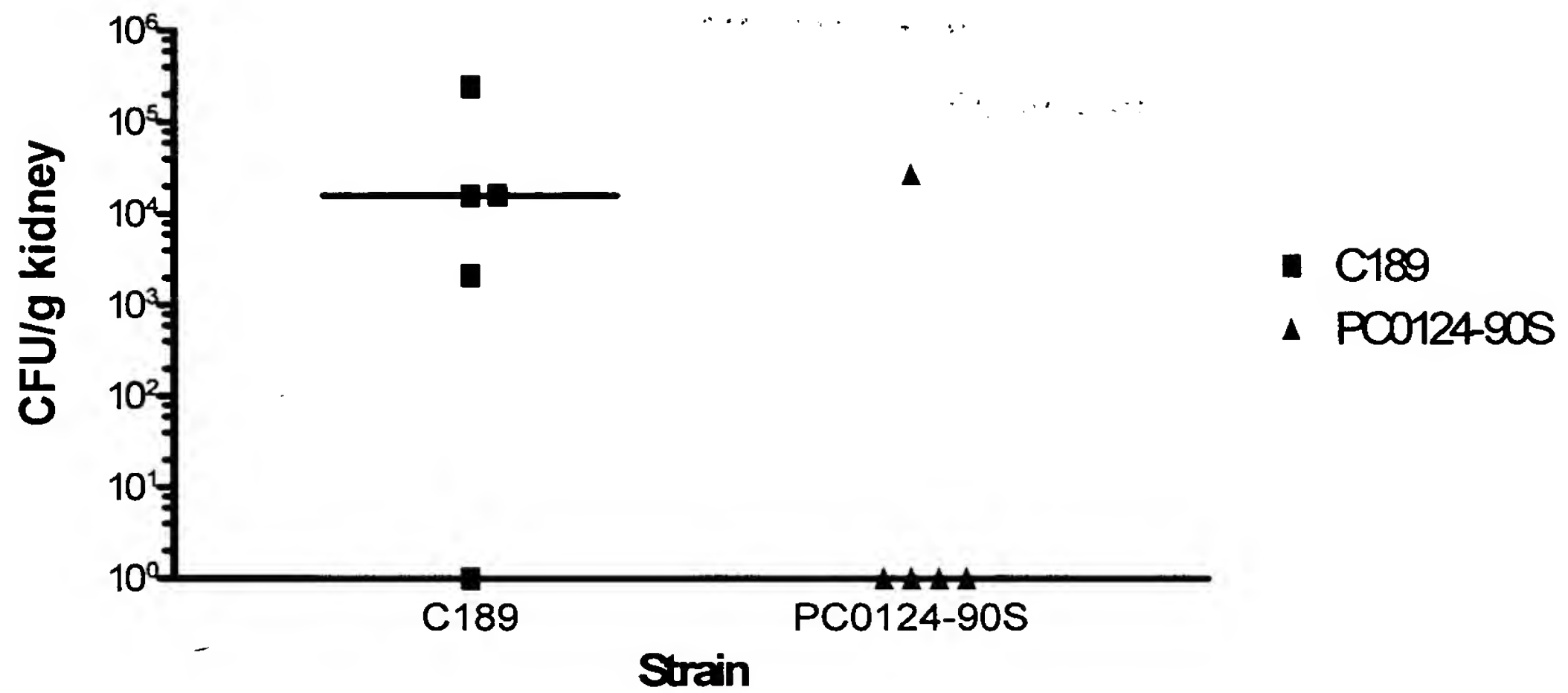


Strains compared	Student's <i>t</i> -test values (p)
KMD vs. PC1012	0.007
KMD vs. PC1005	0.002
KMD vs. PC1035	0.318
KMD vs. PC1037	0.455
KMD vs. PC1033	0.477

Fig. 6



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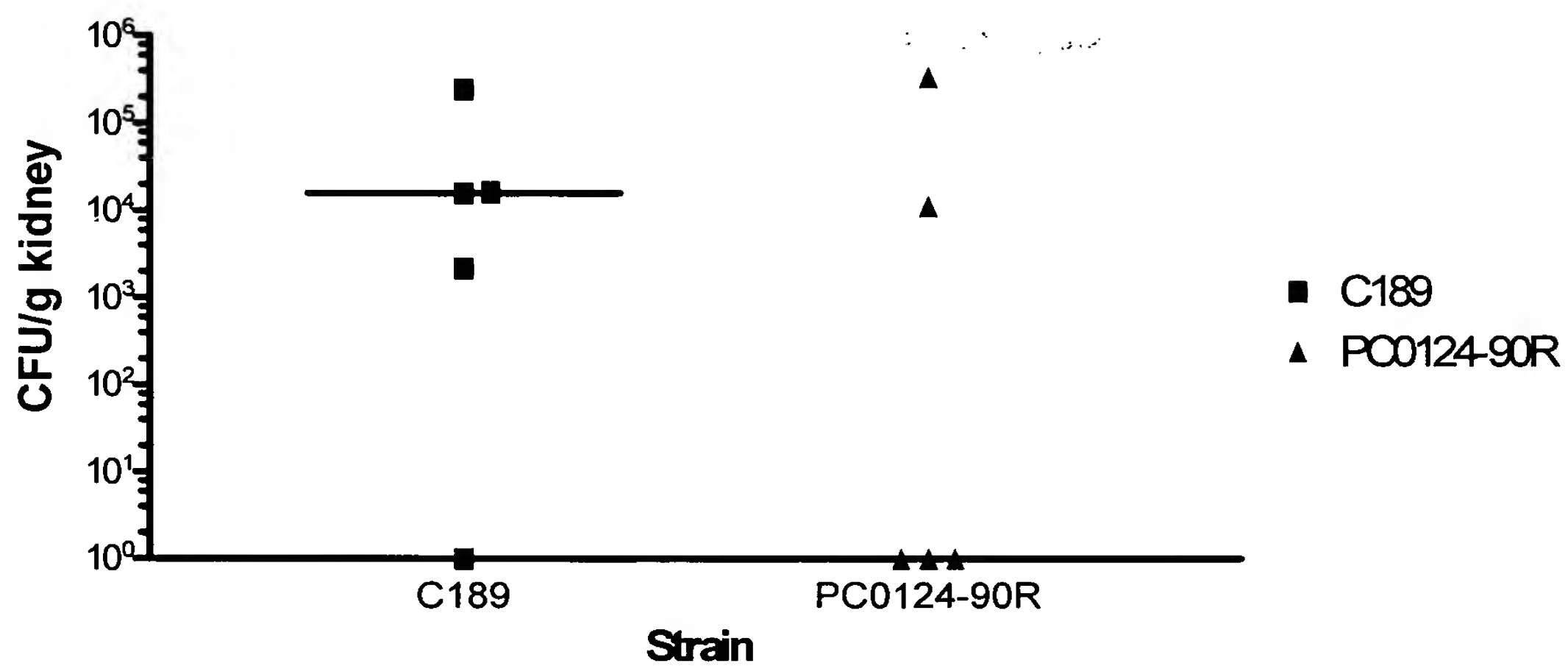


Strain	Student's t-test
C189 vs. PC0124-90S	0.082

Fig. 7



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Strain	Student's t-test
C189 vs. PC0124-90R	0.389

Fig. 8



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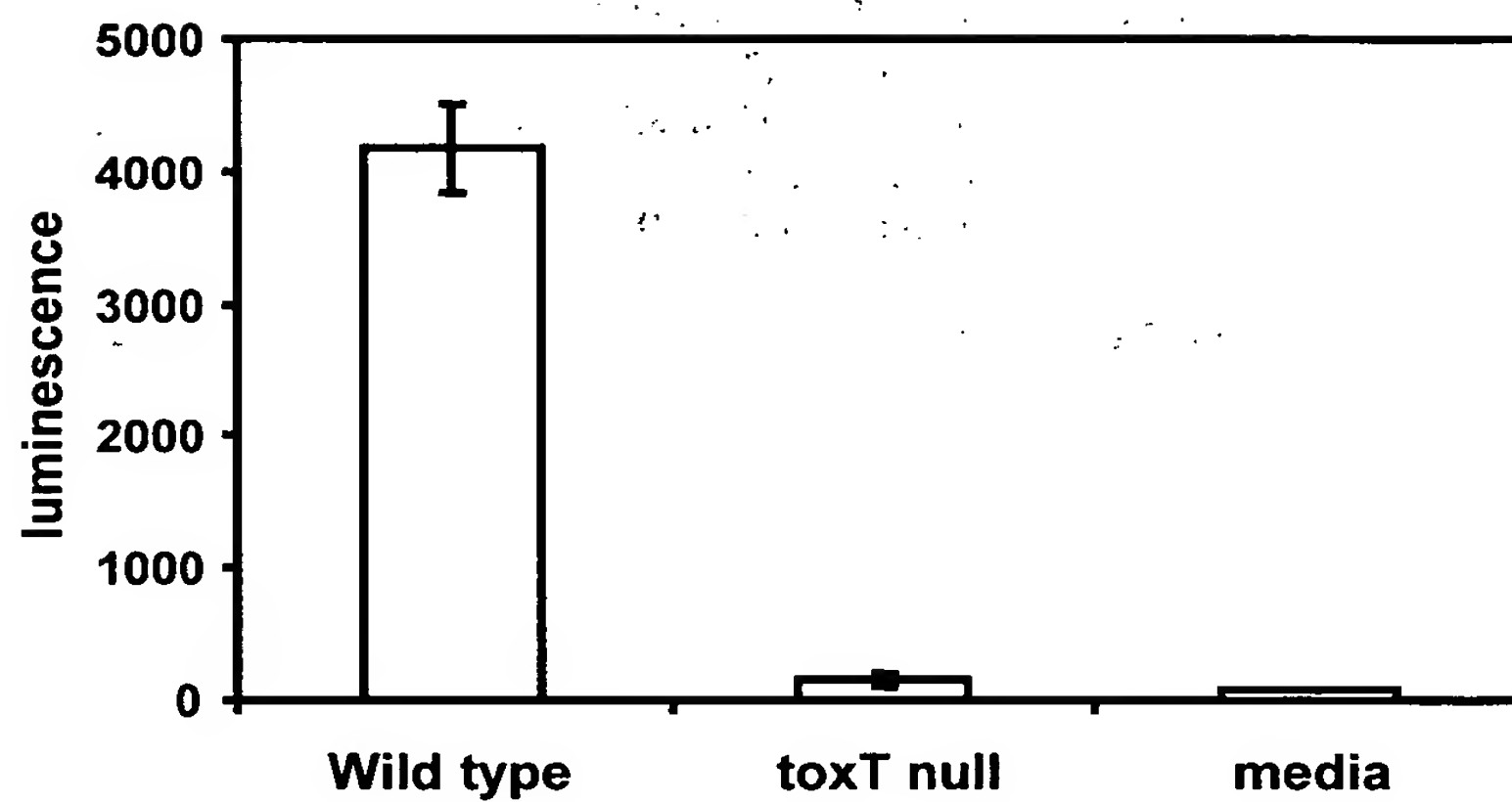


Fig. 9A

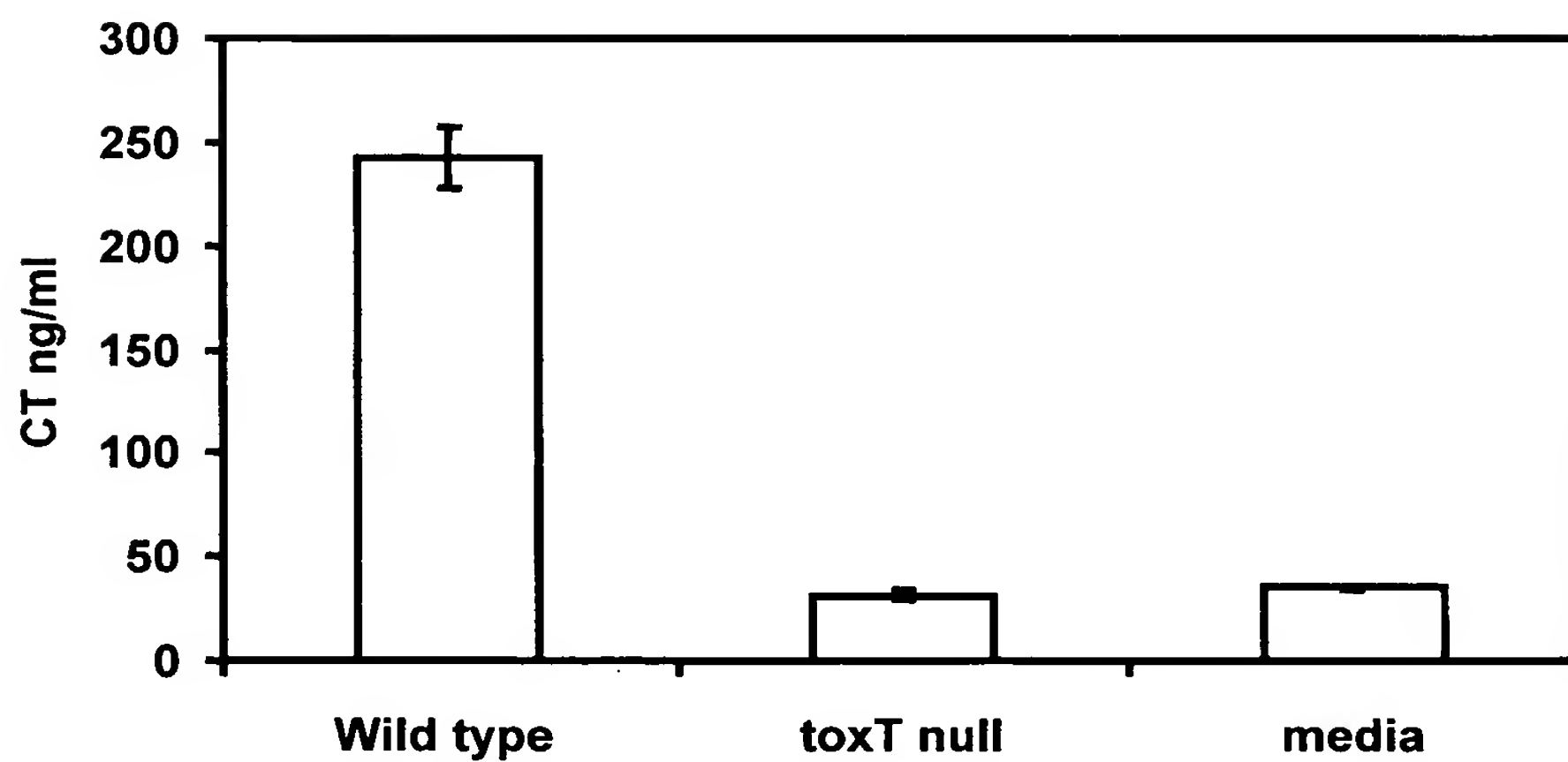


Fig. 9B

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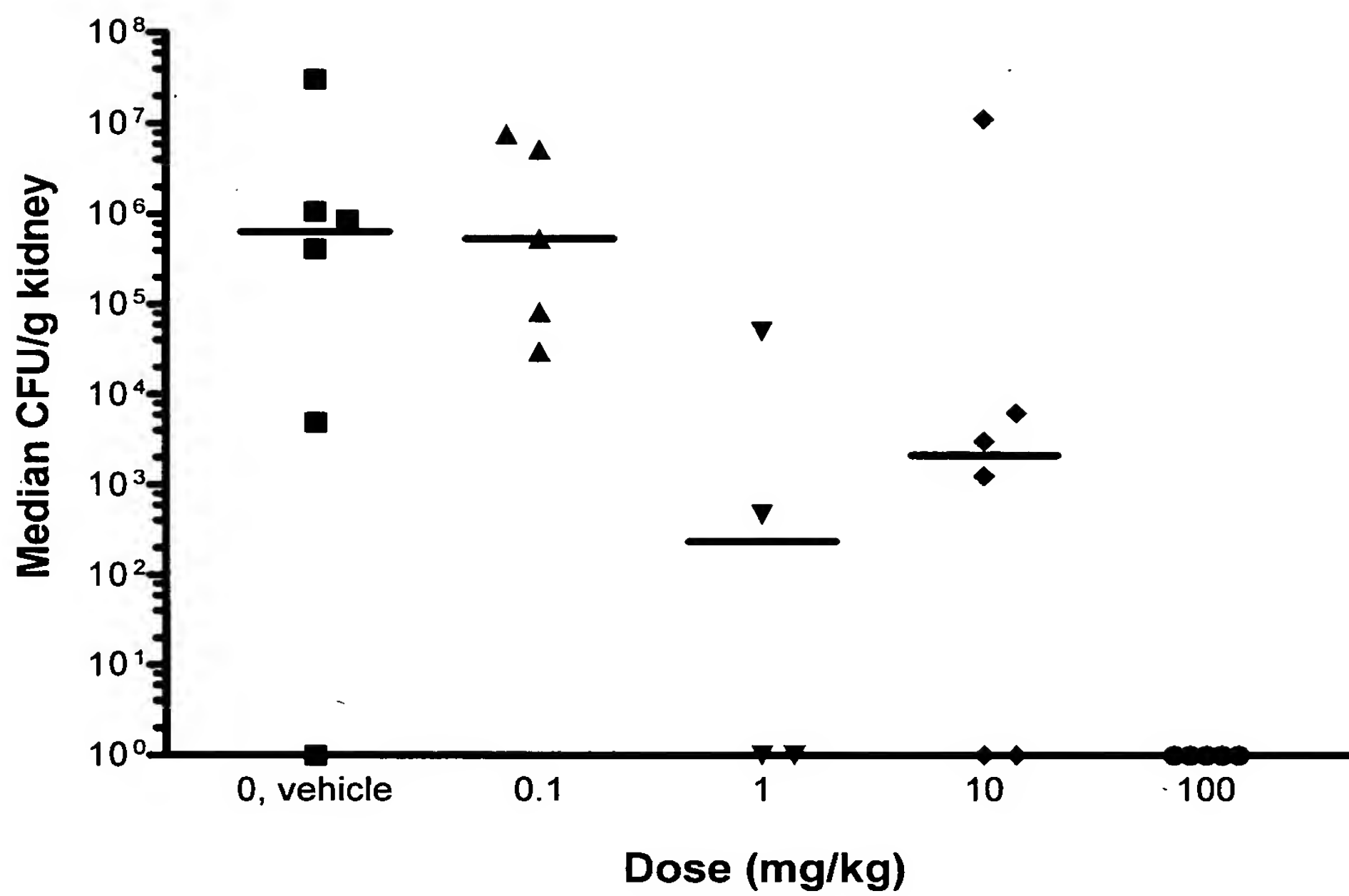


Fig. 10